

**Notice of Allowability**

Application No.

10/686,779

Examiner

Susan W. Berman

Applicant(s)

DU PLESSIS ET AL.

Art Unit

1711

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to AMENDMENT filed 02/13/2006.
2. ☒ The allowed claim(s) is/are 24,25,33-35,41,44 and 45.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some\* c) ☐ None of the:
- ☐ Certified copies of the priority documents have been received.
  - ☒ Certified copies of the priority documents have been received in Application No. 10/475,129.
  - ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- |   |   |
|---|---|
| 1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)           |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                | 6. <input type="checkbox"/> Interview Summary (PTO-413),<br>Paper No./Mail Date _____ |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),<br>Paper No./Mail Date _____ | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment                   |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br>of Biological Material          | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance  |
|   | 9. <input type="checkbox"/> Other _____   |

### **EXAMINER'S AMENDMENT**

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

The application has been amended as follows:

In the specification, paragraph [0001], line 2, insert after Ser. No.,  
“ 10/475/129, now abandoned,”.

### **REASONS FOR ALLOWANCE**

The following is an examiner's statement of reasons for allowance:

With respect to claims 33 and 34, the prior art of record and otherwise known to the examiner does not teach the combination of conditions, i.e. selection of high density polyethylene within the density range set forth and exposing the polyethylene comprising an amorphous phase and a crystalline phase, such as in a solid state, to ionizing radiation in an oxygen-containing atmosphere. The prior art of record teaches exposure to ionizing radiation in an inert atmosphere and/or in the molten state.

With respect to claims 24-25, articles comprising irradiated polyethylene are known in the art, however, the prior art of record and otherwise known to the examiner does not teach an article comprising a polar substrate coated with an irradiated blend of linear low density polyethylene and high density polyethylene wherein the polyethylene comprises a crystalline phase and an amorphous phase which has been irradiated in oxygen to a gel fraction ranging from 0.001 to 8% by weight.

With respect to claims 44-45, articles comprising irradiated polyethylene are known in the art, however, the prior art of record and otherwise known to the examiner does not teach an article comprising

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a polar substrate coated with an irradiated blend of linear low density polyethylene and high density polyethylene wherein the polyethylene comprises a crystalline phase and an amorphous phase and is a blend of high density polyethylene and linear low density polyethylene which has been irradiated in oxygen to a gel fraction ranging from 0.001 to 8% by weight.

With respect to claim 41, molded articles comprising polyethylene are well known in the art; however, the prior art does not teach providing an artifact from high density polyethylene which has been irradiated while comprising an amorphous phase and a crystalline phase, such as in a solid state, with ionizing radiation in an oxygen-containing atmosphere. The prior art of record teaches exposure to ionizing radiation in an inert atmosphere and/or in the molten state.

The polyethylene articles produced as set forth in the instant claims would be expected to have significantly different properties. Specifically polyethylene irradiated in a molten state, because the absence of the crystalline phase, would be expected to have significantly higher gel fractions. Furthermore, irradiation in an oxygen containing atmosphere would be expected to result in production of reactive groups, such as carboxyl groups, in the irradiated polyethylene which provides adhesion to polar substrates while irradiation in an inert atmosphere prevents formation of reactive groups.

Applicant indicated a desire to claim the benefit of a prior-filed application under 35 U.S.C. 120 by including a specific reference to the prior-filed application in compliance with 37 CFR 1.78(a) in the first sentence(s) of the specification following the title or in an application data sheet. The reference included the relationship (i.e., continuation, divisional, or continuation-in-part) of the applications, as required for benefit claims under 35 U.S.C. 120, 121 or 365(c).

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Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Susan W. Berman whose telephone number is 571 272 1067. The examiner can normally be reached on M-F 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on 571 272 1078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

SB  
4/17/06

  
Susan W Berman  
Primary Examiner  
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